

**Instructor, Golden Gate University  
1986 - 1987**

Taught courses on telecommunications regulation to students in the Masters in Telecommunications Management program and students in a special program for federal government telecommunications managers.

**Acting Assistant Professor of Economics, Wesleyan University  
July 1981 - June 1982**

Taught undergraduate courses in microeconomics, macroeconomics, econometrics, and economics and policy of regulation.

**SELECTED TESTIMONY (SINCE 1/1/98)**

**Alaska, Regulatory Commission of**

- Docket No. U-01-83, In the Matter of the Investigation of the Local Exchange Revenue-Requirement, Depreciation, Cost-of-Service, and Rate Design Studies Filed by ACS of Fairbanks, Inc. d/b/a Alaska Communications Systems, ACS Local Service, and ACS, *et al.*, 11/3/03.
- Docket No. U-96-89, In the Matter of the Petition by GCI Communications Corp. d/b/a General Communication, Inc. and GCI for Arbitration Under Section 252 of the Communications Act of 1996 with the Municipality of Anchorage d/b/a ATU Telecommunications a/k/a ATU Telecommunications for the Purpose of Instituting Local Competition, 8/29/03, 9/29/03, 10/13/03.

**California Public Utilities Commission**

- R.95-04-043/ I.95-04-044, Orders Instituting Rulemaking/Investigation on the Commission's Own Motion into Competition for Local Exchange Service, 12/12/03, 1/16/04, 2/9/04, 2/18/04.
- Case No. 02-09-045, Mpower Communications Corp. (U-5859-C), Complainant, v. Pacific Bell Telephone Company (U-1001-C), Defendant, 5/23/03, 6/4/03.
- R.01-09-001/ I.01-09-002, Orders Instituting Rulemaking/Investigation on the Commission's Own Motion to Assess and Revise the New Regulatory Framework for Pacific Bell and Verizon California Incorporated, 6/21/02, 7/19/02.
- R.93-04-003/I.93-04-002, Rulemaking and Investigation on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish and Framework for Network Architecture Development of Dominant Carrier Networks, and R. 95-04-043/I.95-04-044, Rulemaking and Investigation on the Commission's Own Motion into Competition for Local Exchange Service (consolidated for purposes of evaluating Pacific Bell's Section 271 application), 8/23/01.
- A.01-02-024, Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050, and A.01-02-035, Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Loops in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99 11-050, 2/21/01, 2/28/01, 8/20/01, 10/30/01, 11/9/02, 2/28/02, 10/18/02, 2/7/03, 3/12/03.

- Distance Company (d/b/a Verizon Enterprise Solutions), and Verizon Global Networks, Inc., Defendants, 5/7/02.
- CC Docket Nos. 00-218, 00-249 and 00-251, In the Matter of the Petition of WorldCom, Inc., Pursuant to Section 252(e)(5) of the Communications Act for Expedited Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc., and for Expedited Arbitration, *et al.*, 7/31/01, 8/27/01, 9/21/01, 10/28/03.
  - File No. E-98-12, MCI Telecommunications Corp. and MCImetro Access Transmission Services, Inc., Complainants, v. Bell Atlantic Corp., Defendant, 3/25/98.

**Florida Public Service Commission**

- Docket Nos. 981834-TP and 990321-TP, In re: Petition of competitive carriers for Commission action to support local competition in BellSouth Telecommunications, Inc.'s service territory and Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost-efficient physical collocation, 9/25/03.
- Docket No. 990649-TP, In re: Investigation into the Pricing of Unbundled Network Elements, 8/11/99, 9/10/99, 10/15/99, 6/8/00, 7/31/00, 8/28/00.

**Georgia Public Service Commission**

- Docket No. 14361-U, In re: Generic Proceeding to Review Cost Studies, Methodologies, Pricing Policies and Cost Based Rates for Interconnection and Unbundling of BellSouth Telecommunications, Inc.'s Network, 4/5/02, 7/26/04.
- Docket No. 11900-U, In re: Investigation of BellSouth Telecommunications, Inc.'s Provision of Unbundled Network Elements for xDSL Service Providers, 11/13/00, 12/20/00.

**Hawaii Public Service Commission**

- Docket No. 7702, In the Matter of Public Utilities Commission Instituting a Proceeding on Communications, Including an Investigation of the Communications Infrastructure of the State of Hawaii, 6/2/00.

**Illinois Commerce Commission**

- Docket No. 03-0595, In the Matter of the Implementation of the Federal Communications Commission's Triennial Review Regarding Local Circuit Switching in the Mass Market, 1/20/04, 2/24/04.
- Docket No. 02-0864, Illinois Bell Telephone Company Filing to Increase Unbundled Loop And Nonrecurring Rates (Tariffs filed December 24, 2002), 5/6/03, 1/20/04, 2/20/04, 3/5/04.
- Docket No. 00-0393, Illinois Bell Telephone Company Proposed Implementation of High Frequency Portion of Loop (HFPL) / Line Sharing Service, 9/1/00, 9/20/00, 10/4/00.
- Docket Nos. 00-0312 and 00-0313, Petitions of Covad Communications Company and Rhythms Links Inc. for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Amendment for Line Sharing to the Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech

Illinois, and for an Expedited Arbitration Award on Certain Core Issues, 5/15/00, 6/22/00, 11/21/00, 12/12/00, 12/21/00, 7/13/00.

- Docket No. 98-0396, Investigation into the Compliance of Illinois Bell Telephone Company with the Order in Docket 96-0486/0569 Consolidated Regarding the Filing of Tariffs and the Accompanying Cost Studies for Interconnection, Unbundled Network Elements and Local Transport and Termination and Regarding End to End Bundling Issues, 3/29/00, 5/5/00, 7/12/00.
- Docket No. 99-0593, Investigation of Construction Charges, 2/17/00, 3/8/00, 3/22/00.

**Indiana Utility Regulatory Commission**

- Cause No. 42393, In the Matter of the Commission Investigation and Generic Proceeding of Rates and Unbundled Network Elements and Collocation for Indiana Bell Telephone Company, Incorporated, D/B/A SNV Indiana Pursuant to the Telecommunications Act of 1996 and Related Indiana Statutes, 8/15/03.

**Kansas Corporation Commission**

- Docket No. 00-DCIT-997-ARB, In the Matter of the Petition of Covad Communications Company for Arbitration of Interconnection Rates, Terms, Conditions and Related Arrangements for Line Sharing with Southwestern Bell Telephone Company, 6/12/00.
- Docket No. 00-DCIT-389-ARB, In the Matter of the Petition of DIECA Communications, Inc. d/b/a Covad Communications Company for Arbitration of Interconnection Rates, Terms, Conditions and Related Arrangements with Southwestern Bell Telephone Company, 1/7/00, 1/25/00, 2/21/00.

**Maryland Public Service Commission**

- Case No. 8918, In the Matter of the Review of Verizon Maryland Inc.'s Price Cap Regulatory Plan, 9/13/02.
- Case No. 8921, In the Matter of the Review by the Commission into Verizon Maryland Inc.'s Compliance with the Conditions of 47 U.S.C. § 271(c), 7/15/02.
- Case No. 8879, In the Matter of the Investigation into Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996, 5/25/01, 9/5/01, 10/15/01.
- Case No. 8745, In the Matter of the Provision of Universal Service to Telecommunications Consumers, 5/21/01, 6/11/01.
- Case No. 8842, In the Matter of Rhythms Links Inc. and Covad Communications Company vs. Bell Atlantic-Maryland, Inc., pursuant to Section 252(B) of the Telecommunications Act of 1996, 5/5/00, 7/14/00, 10/27/00.
- Case No. 8820, In the Matter of the Investigation into Affiliated Activities, Promotional Practices and Codes of Conduct of Regulated Gas and Electric Companies, 10/1/99, 10/26/99, 12/10/99.
- Docket No. 8797, In the Matter of The Potomac Edison Company's Proposed: (a) Stranded Cost Quantification Mechanism; (b) Price Protection Mechanism; (c) and Unbundled Rates, 1/26/99.
- Docket No. 8795, In the Matter of Delmarva Power and Light Company's Proposed Stranded Cost Quantification Mechanism, Price Protection Mechanism, and Unbundled Rates, 12/28/98.
- Docket No. 8794, In the Matter of Baltimore Gas and Electric (BGE)'s Proposed Stranded Cost Quantification Mechanism, Price Protection Mechanism, and Unbundled Rates, 12/22/98, 7/23/99, 8/3/99.

- Docket No. 8786, In the Matter of the Investigation of Non-Recurring Charges for Telecommunications Interconnection Service, 5/27/98, 11/16/98, 12/18/98.

**Massachusetts Department of Telecommunications and Energy**

- Docket No. DTE 98-57, Investigation by the Department on its own motion as to the propriety of the rates and charges set forth in the following tariffs: M.D.T.E. Nos. 14 and 17, filed with the Department on April 2, 1999, to become effective May 2, 1999, by New England Telephone and Telegraph Company d/b/a Bell Atlantic – Massachusetts, 7/26/99, 11/9/99.

**Michigan Public Service Commission**

- Case No. U-13531, In the Matter of, on the Commission's Own Motion, to Review the Costs of Telecommunications Services Provided by SBC Michigan, 1/20/04, 5/10/04.
- Case No. U-13796, In the Matter of, on the Commission's Own Motion, to Facilitate the Implementation of the Federal Communications Commission's Triennial Review Determinations in Michigan, 12/19/03, 2/10/04, 3/5/04.
- Case No. U-12540, In the Matter of the Application of Ameritech Michigan for Approval of Cost Studies and Resolution of Disputed Issues Related to Certain New UNE Offerings, 9/15/00, 10/13/00.

**Minnesota Public Utilities Commission**

- PUC Docket No. P-999/CI-03-961, In the Matter of the Commission Investigation into ILEC Unbundling Obligations as a Result of the Federal Triennial Review Order, 1/23/04.
- PUC Docket No. P-421/CI-01-1371, In the Matter of a Commission Investigation into Qwest's Compliance with Section 272(c)(2)(B) of the Telecommunications Act of 1996; Checklist Items 1.2, 4, 5, 6, 11, 13, and 14, 6/10/02, 8/2/02, 8/29/02, 9/10/02.
- PUC Docket No. P-421/CI-01-1370, In the Matter of a Commission Investigation into Qwest's Compliance with Section 272(c)(2)(B) of the Telecommunications Act of 1996; Checklist Items 3, 7, 8, 9, 10 and 12, 1/28/02, 2/22/02.

**Missouri Public Service Commission**

- Case No. TO-2001-439, In the Matter of the Determination of Prices, Terms, and Conditions of Conditioning for xDSL-Capable Loops, 6/22/01, 7/13/01.
- Case No. TO-2000-322, In the Matter of the Petition of DIECA Communications, Inc. d/b/a Covad Communications Company for Arbitration of Interconnection Rates, Terms, Conditions and Related Arrangements with Southwestern Bell Telephone Company, 1/7/00, 1/27/00, 2/10/00.

**Nevada Public Service Commission**

- In re a Petition of the Staff of the Public Utilities Commission to Open a Docket to Investigate Costing and Pricing Issues Related to Industry-Wide Collocation Costs Pursuant to the Telecommunications Act of 1996 and the Commission's Regulations, 11/3/00.

**New Jersey Board of Public Utilities**

- Docket No. TO00060356, In the Matter of the Board's Review of Unbundled Network Elements Rates, Terms and Conditions of Bell Atlantic – New Jersey, 10/12/00.

**New York Public Service Commission**

- Case No. 98-C-1357, Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements, 9/23/99, 10/18/99, 10/22/99, 2/7/00, 2/22/00, 3/31/00, 4/17/00, 6/26/00, 10/19/00, 11/13/00.

**Ohio Public Utilities Commission**

- Case No. 02-1280-TP-UNC, In the Matter of the Review of SBC Ohio's TELRIC Costs for Unbundled Network Elements, 5/28/04.
- Case No. 03-2040-TP-COI, In the Matter of the Implementation of the Federal Communications Commission's Triennial Review Regarding Local Circuit Switching in the Mass Market, 12/1/03.
- Case No. 96-922-TP-UNC, In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic, 10/6/00.

**Oklahoma Corporation Commission**

- Cause No. PUD 200000192, Applicant: Southwestern Bell Telephone Company; Relief Sought: Approval of Nonrecurring Rates for Conditioning Unbundled Digital Subscriber Line ("DSL") Capable Loops, 7/12/00, 8/1/00.

**Oregon Public Utility Commission**

- Case No. UM-731, Phase IV, In the Matter of the Investigation of Universal Service in the State of Oregon, 1/17/00.

**Pennsylvania Public Utility Commission**

- Docket No. R-00016683, Generic Investigation of Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates, 12/7/01, 1/11/02, 2/8/02.
- Docket No. M-00001353, Re Structural Separation of Verizon-Pennsylvania Inc. Wholesale and Retail Operations, 10/10/00.
- Docket No. R-00005261, In re: Further Pricing of Bell Atlantic Pennsylvania, Inc.'s Unbundled Network Elements, 10/4/00.
- Docket Nos. R-00994697 and R-994697C0001, Pennsylvania Public Utility Commission v. Bell Atlantic – Pennsylvania, Inc./ Rhythms Links Inc., Complainant v. Bell Atlantic – Pennsylvania, Inc., Respondent, 12/21/99, 1/14/00.
- Docket Nos. P-00991648, Joint Application of NEXTLINK Pennsylvania, Inc., *et al.* and P-00991649, Joint Application of Bell Atlantic – Pennsylvania, Inc., *et al.*, 4/22/99, 6/11/99.
- Docket Nos. A-310200F0002 *et al.*, In re the Joint Application of Bell Atlantic Corporation and GTE Corporation for Approval of Agreement and Plan of Merger, 3/23/99, 5/19/99.

**Tennessee Regulatory Authority**

- Docket No. 97-00309, In Re: BellSouth Telecommunications, Inc.'s Entry into Long Distance (interLATA) Service in Tennessee Pursuant to Section 271 of the Telecommunications Act of 1996, 7/11/02.

**Texas Public Utility Commission**

- Docket No. 28607, Impairment Analysis of Local Circuit Switching for the Mass Market, 2/9/04, 3/19/04.
- Docket No. 28600, Arbitration of Phase I Costing Issues for Successor Interconnection Agreements to the Texas 271 Agreement, 12/5/04, 1/5/04.
- Docket No. 25834, Proceeding on Cost Issues Severed from P.U.C. Docket No. 24542, 11/4/02, 2/14/03.
- Docket Nos. 22168, Petition of IP Communications Corporation to Establish Public Utility Commission of Texas Oversight Concerning Line Sharing Issues and 22469, Complaint of Covad Communications Company and Rhythms Links, Inc. against Southwestern Bell Telephone Company and GTE Southwest Inc. for Post-Interconnection and Arbitration under the Telecommunications Act of 1996 Regarding Rates, Terms, Conditions and Related Arrangements for Line-Sharing, 5/17/00, 9/5/00 (rev. 10/6/00), 10/20/00.
- Docket Nos. 20226, Petition of Accelerated Connections, Inc. d/b/a ACI Corp. for Arbitration to Establish an Interconnection Agreement with Southwestern Bell Telephone Company, and 20272, Petition of DIECA Communications, Inc., d/b/a Covad Communications Company for Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with Southwestern Bell Telephone Company, 2/19/99, 4/8/99.

**Washington Utilities and Transportation Commission**

- Docket No. UT-960639 *et al.*, Phase II, In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale, 8/20/98, 9/11/98.

**Wisconsin Public Service Commission**

- Docket No. 6720-TI-187, Petition of Wisconsin Bell, Inc., d/b/a SBC Wisconsin, to Establish Rates and Costs for Unbundled Network Elements, 6/15/04.

**EDUCATION**

**A.B.**, Oberlin College, Oberlin, Ohio. Major: Economics. National Merit Scholar, recipient of Hanson Prize in Economics, elected to Phi Beta Kappa.

**M.A., M.Phil.**, Yale University, New Haven, Connecticut. Economics. Admitted to Ph.D. candidacy and completed all Ph.D. requirements except dissertation. Fields of specialization included industrial organization and energy and environmental economics. Honorable mention, National Science Foundation Fellowship; recipient of University Fellowship and Sloan Foundation dissertation research fellowship.

**MURRAY DECLARATION**

**EXHIBIT 2**

**(ELECTRONIC ONLY) SPREADSHEET TOOL SHOWING  
TRIGGER ANALYSIS FOR SBC CALIFORNIA**

**(Filed on CD-ROM)**

**MURRAY DECLARATION**

**EXHIBIT 3**

**(ELECTRONIC ONLY) SPREADSHEET TOOL SHOWING  
TRIGGER ANALYSIS FOR VERIZON CALIFORNIA**

**(Filed on CD-ROM)**



**MURRAY DECLARATION**

**EXHIBIT 4**

**INSTRUCTIONS FOR USE OF SPREADSHEET TOOL**

## **Instructions for Use of Spreadsheet Tool**

### *Tools*

To illustrate the implementation of the trigger analysis that I have proposed, I have prepared two trigger tools for California, based on data obtained in the California mass market switching impairment proceeding. The proprietary data contained within the models is being presented here in accordance with the protective orders in the California Public Utilities Commission Docket R.95-04-043/I.95-04-044 (FCC Triennial Review 9-Month Phase) and this proceeding.

These spreadsheet models begin with the data presented by the incumbents in California, SBC California and Verizon California, in support of their claims that CLECs are not impaired in certain markets. The tools then evaluate each potential triggering company claimed by the incumbent against the criteria I describe in Section II of my declaration.

I provide these tools as an example of the analysis I propose. Given the appropriate data, similar tools could be constructed to apply the analysis for other companies and geographical areas. For example, I filed similar tools in Illinois, Michigan and Texas.

### *Filenames*

I have provided the following files:

Murray SBC CA WC Trigger Model (TRO Remand).xls (Exhibit 2)

Murray Verizon CA WC Trigger Model (TRO Remand).xls (Exhibit 3)

The public version of the CD contains the files stripped of all data; the proprietary version contains the fully populated version of both files.

### *Screens*

The various “screens” implemented in the spreadsheets are used to determine if the claimed trigger companies should be counted toward the retail “trigger” in a particular wire center market. The appropriate screens are discussed at length in Section II of my declaration. With one exception, the assumptions for the analysis are set on the “Inputs & Results” sheet. Each screen is then applied in a separate worksheet of the model on the input data (discussed below). The screens are listed briefly below, along with notes on how to apply them:

- Screen for Data Errors - Remove Data Anomalies: This screen exists only in the SBC version of the trigger tool, to address wire centers for which SBC’s data listed CLEC mass market loops, but no SBC retail lines. This screen is not activated on the “Inputs & Results” sheet, but instead on the “Data Error Screen”

sheet. If this screen is turned off, the market share screen will not work for the affected wire centers.

Screens 0 through 8 are activated on the “Inputs & Results” sheet. For a screen to operate, the screen input must be set to “On.” Most screens require additional input in the form of carrier names, etc.

*Note: The screens only work properly if the CLEC names are exactly the same as found in the data. Therefore, it is important that these names not be changed in the model. Input sections pull from a drop down list to avoid errors associated with typographical errors, etc. (CLEC names for the drop down lists are input in the “Inputs & Results” sheet in column O.) This is also true for other input information, such as wire-center names.*

- Screen 0 – Generic (User-Defined) Screen - Screen Out CLECs For User-Defined Reason: This screen is included so that additional screens may be tested. It was designed as an “exclusive” screen, that is, when it is “On,” the companies input in the “Generic (User-Defined) CLEC Screen” section will be excluded from the analysis. Up to five CLECs can be excluded in this screen as currently implemented.
- Screen 1 – Switch Ownership - Screen Out CLECs That Do Not Serve Customers From Their Own Switch(es): This is an “exclusive” screen, that is, when it is “On” the companies input in the “CLECs That Do Not Serve Customers From Their Own Switch” section will be excluded from the analysis. Up to three CLECs can be excluded in this screen as currently implemented.
- Screen 2 – ILEC Affiliation - Screen Out CLECs That Are ILEC Affiliates: This is an “exclusive” screen, that is, when it is “On,” the companies input in the “CLECs That Are ILEC Affiliates” section will be excluded from the analysis. Up to five CLECs can be excluded in this screen as currently implemented.
- Screen 3 – CLEC Affiliation - Consolidate Affiliated CLECs: This function consolidates line counts for affiliated CLECs. Affiliated CLECs are input in the “CLECs That Are Affiliated With Each Other” section, with the “Acquired CLEC” in the first column and the “Acquiring CLEC” in the second column. The new combined company will be listed as “Acquiring CLEC / Acquired CLEC.” When this screen is “On,” the model(s) sums the mass market loops of the affiliated CLECs and assigns those to the new “combined” CLEC. This screen works only for one pair of affiliated CLECs as currently implemented. *Note: If this screen is activated, all other screens will work only on the combined CLEC name. It is important to include the combined name in any screen input where it would be needed. For example, to exclude the combined company with the user-defined screen when Screen 3 on, CLEC A / CLEC B should be input in the*

*Screen 0 input field, rather than CLEC A or CLEC B. Additional note: It is important that this screen never be activated without CLEC names in both columns of the “CLECs That Are Affiliated With Each Other” section (otherwise, the models will try to consolidate blank entries, for example). Also, this screen is only set up to work for UNE-L CLECs in these versions of the tools and may show strange results if cable companies were input.*

- Screen 4 – Active & Continuing - Screen Out CLECs With Fewer Than X Loops (see LoopCutoff): This screen requires a minimum loop cutoff be input in the “The Minimum Number Of Loops A CLEC Must Have At A Wire Center” section. It excludes a CLEC from any *wire center* in which that CLEC has fewer than the number set for “LoopCutoff.”
- Screen 5 – Active & Continuing - Screen Out CLECs That Are No Longer Offering Service: This is an “exclusive” screen, that is, when it is “On” the companies input in the “CLECs That Are No Longer Offering Service” section will be excluded from the analysis. Up to five CLECs can be excluded in this screen as currently implemented.
- Screen 6 – Residential Service - Screen Out CLECs That Are Not Offering Residential Service: This is an “inclusive” screen, that is, when it is “On” only the companies input in the “CLECs That Offer Service To Residential Customers” section will be included in the analysis. If a company is not included in the input section, it will be excluded from the analysis. Up to seven CLECs can be included in this screen as currently implemented. *Note: This is the only “inclusive” screen implemented in these versions of the tools.*
- Screen 7 – Comparable In Cost, Quality & Maturity - Screen Out Cable-Based Lines: This screen excludes any cable-based lines from consideration. If a company has only cable-based lines (as indicated by the E911 or LNP columns in the “Original Data” sheet), it will be screened out. This screen requires no input, other than On/Off.
- Screen 8 – Operational Considerations - Screen Out CLECs Not Achieving A Minimum Market Share: This screen requires a minimum loop cutoff be input in the “The Minimum Percentage Market Share A CLEC Must Achieve In A Market” section. It excludes a CLEC from any *market* (in this case, wire center) in which that CLEC has a market share that is less than the number set for “MarketShareCutoff.” The market share is calculated using total loops. In the SBC version, SBC’s data include “SBC retail” line counts; therefore, the CLEC mass market UNE-L loops are added in to get the “total” market. In the Verizon version, Verizon’s data include “working loop” counts; therefore, it is not necessary to add the CLEC mass market loops in the “total.” *Note: When Screen 7 (Cost, Quality & Maturity) is “On” (that is, cable is excluded), the market*

*shares are calculated without the cable line counts as a part of the market total; when Screen 7 is “Off” (that is, cable is included), the market shares are calculated with the cable line counts as a part of the market total.*

### *Results*

The results of the analysis can be found in two sheets of the model:

- “Inputs & Results” sheet: The results show the *number of CLECs* in each market (in this case, wire center) both before any screens were applied and after the screens that are currently activated. These versions of the model also show a summary by MSA of the *number of wire centers* that have at least 3 CLECs. To see total counts by MSA, filter on “NonBlanks” in column H; to see wire center detail, remove filter (set to “All”).
- “WC Results Detail” sheet: Shows CLECs by wire center that have survived all the screens. Filter on nonblanks to see only the CLECs/wire centers left.

### *Original Data*

The “Original Data” sheet in the SBC version contains the following data items, taken from SBC’s own data:

- LNP Cable Data column: SBC’s estimate of cable loop counts assigned to SBC wire centers.
- MM Loops column: SBC’s estimate of number mass-market UNE-Loops, based on SBCs definition of “mass market” (*i.e.*, UNE-L DS-0s that are to an address where there are three or fewer DS-0s).
- SBC Lines column: As I understand it, this count includes SBC retail, UNE-P, and resale, but not UNE-L.
- CLEC’s Total MM Loops column: Sum of mass-market loops and LNP (cable) loops. This column is calculated by the model.
- Total Loops Excluding Cable column: SBC lines plus the sum of all the CLEC mass-market loops at that wire center, excluding cable. This column is calculated by the model.
- Market Share Excluding Cable Loops column: CLEC’s mass-market loops as percentage of the total loops (excluding cable). This column is calculated by the model.
- Total Loops Including Cable Loops column: SBC lines plus the sum of all the CLEC mass-market loops at that wire center, including cable.
- Market Share Including Cable Loops column: CLEC’s mass-market loops as percentage of the total loops (including cable). This column is calculated by the model.

The “Original Data” sheet in the Verizon version contains the following data items, taken from Verizon’s own data:

- E911 Cable Data column: Verizon’s estimate of cable line counts, which it identified using E911 records.
- MM Loops column: Verizon’s estimate of mass-market UNE-L, according to Verizon definition of “mass market” (i.e., any DS-0). *Note: When CLECs provided loop counts to VZ, those are used, when they did not, the VZ loop counts are used*
- Total Working Lines column: “Total Working” lines taken from Verizon’s “CA MCI-ATT Exhibit 46 revised.xls”; I have assumed that this includes retail, UNE-P, resale, and UNE-L.
- CLEC’s Total MM Loops column: Sum of mass-market loops and E911 (cable) loops. This column is calculated by the model.
- Total Loops Excluding Cable column: Same as total working lines.
- Market Share Excluding Cable Loops column: CLEC’s mass-market loops as percentage of the total loops (excluding cable). This column is calculated by the model.
- Total Loops Including Cable Loops column: Verizon total working loops plus the sum of all cable loops at that wire center. This column is calculated by the model.
- Market Share Including Cable Loops column: CLEC’s mass-market loops as percentage of the total loops (including cable). This column is calculated by the model.

**MURRAY DECLARATION**

**EXHIBIT 5**

**PROPRIETARY SUMMARY TABLES REPORTING RESULTS OF SBC  
AND VERIZON CALIFORNIA TRIGGER ANALYSES**

**(Also Filed on CD-ROM)**

Murray Declaration – Exhibit 5

MCI Comments

WC Docket 04-313

October 4, 2004

Summary Tables Reporting Results of SBC and Verizon California Trigger Analyses

**\*\*\*REDACTED\*\*\***

**REDACTED IN FULL**

**REDACTED – FOR PUBLIC INSPECTION**



**MURRAY DECLARATION**

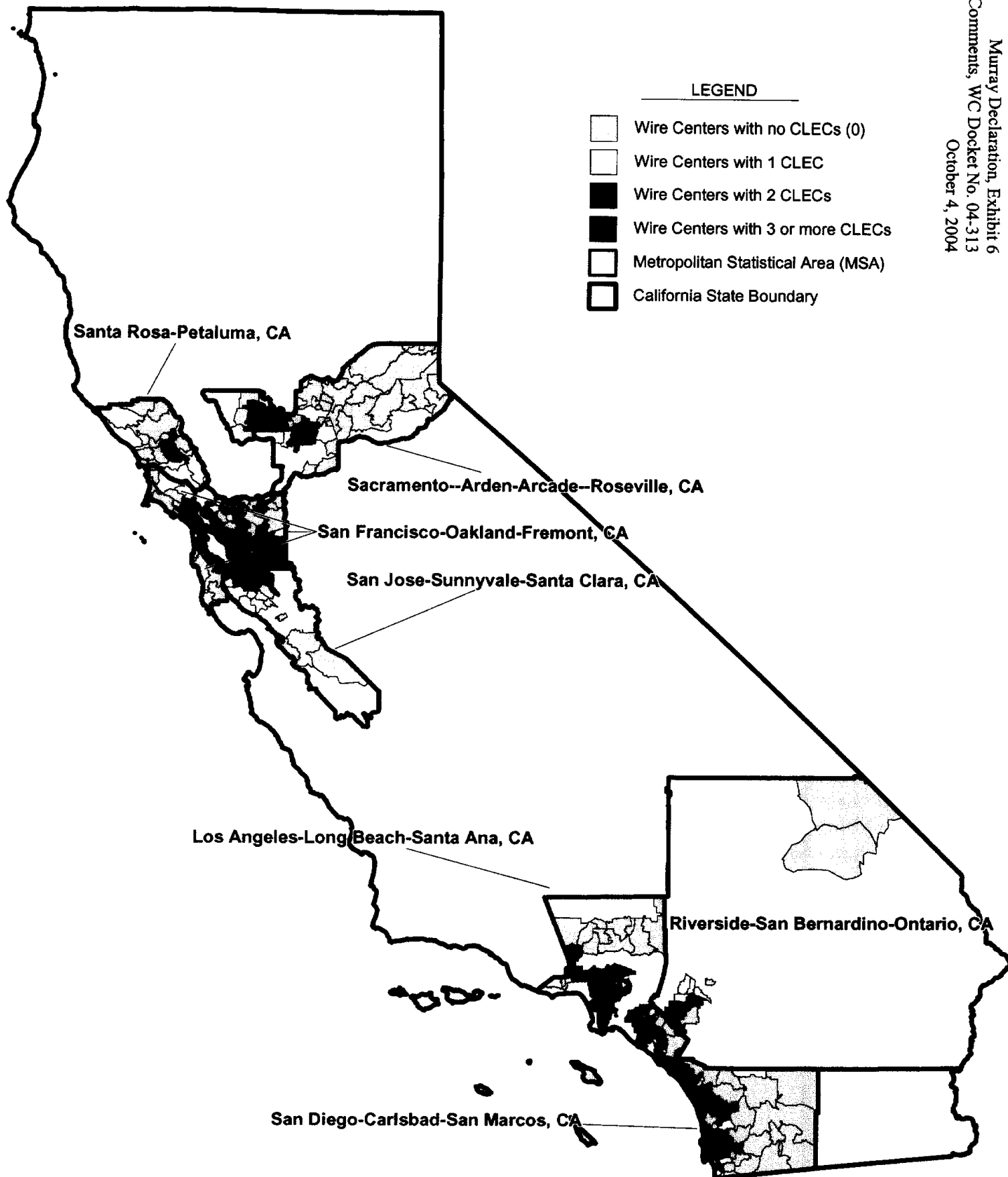
**EXHIBIT 6**

**MAPS SHOWING RESULTS OF SBC AND VERIZON  
CALIFORNIA TRIGGER ANALYSES**

**REDACTED – FOR PUBLIC INSPECTION**

**MASS-MARKET TRIGGER BASE CASE**  
**Replication Of CLEC Counts Underlying SBC Trigger Claim**  
**(SBC California Service Territory)**

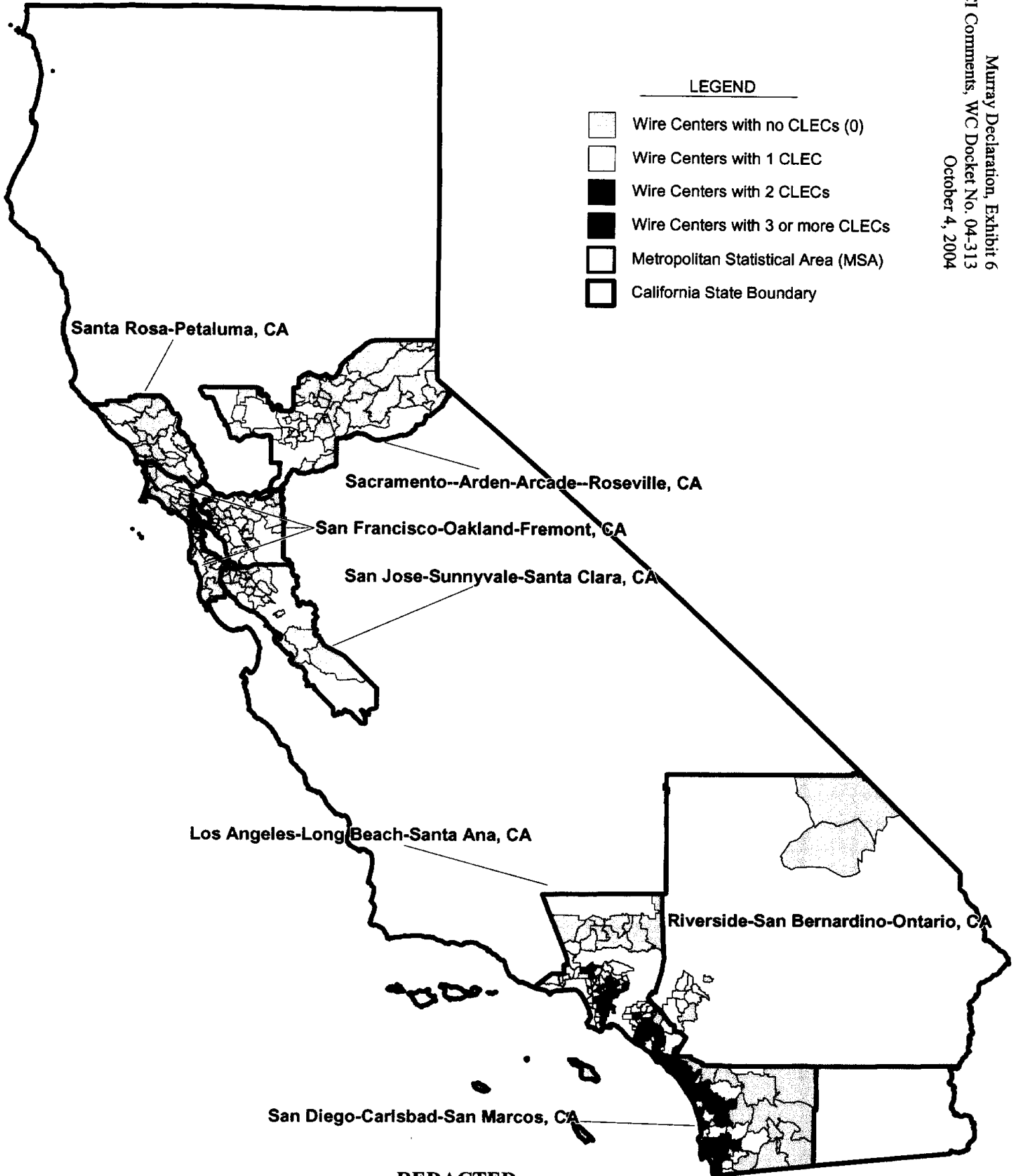
Murray Declaration, Exhibit 6  
MCI Comments, WC Docket No. 04-313  
October 4, 2004



**REDACTED –**  
**FOR PUBLIC INSPECTION**

**ACTIVE UNAFFILIATED CLECS  
THAT SERVE RESIDENTIAL CUSTOMERS  
(SBC California Service Territory)**

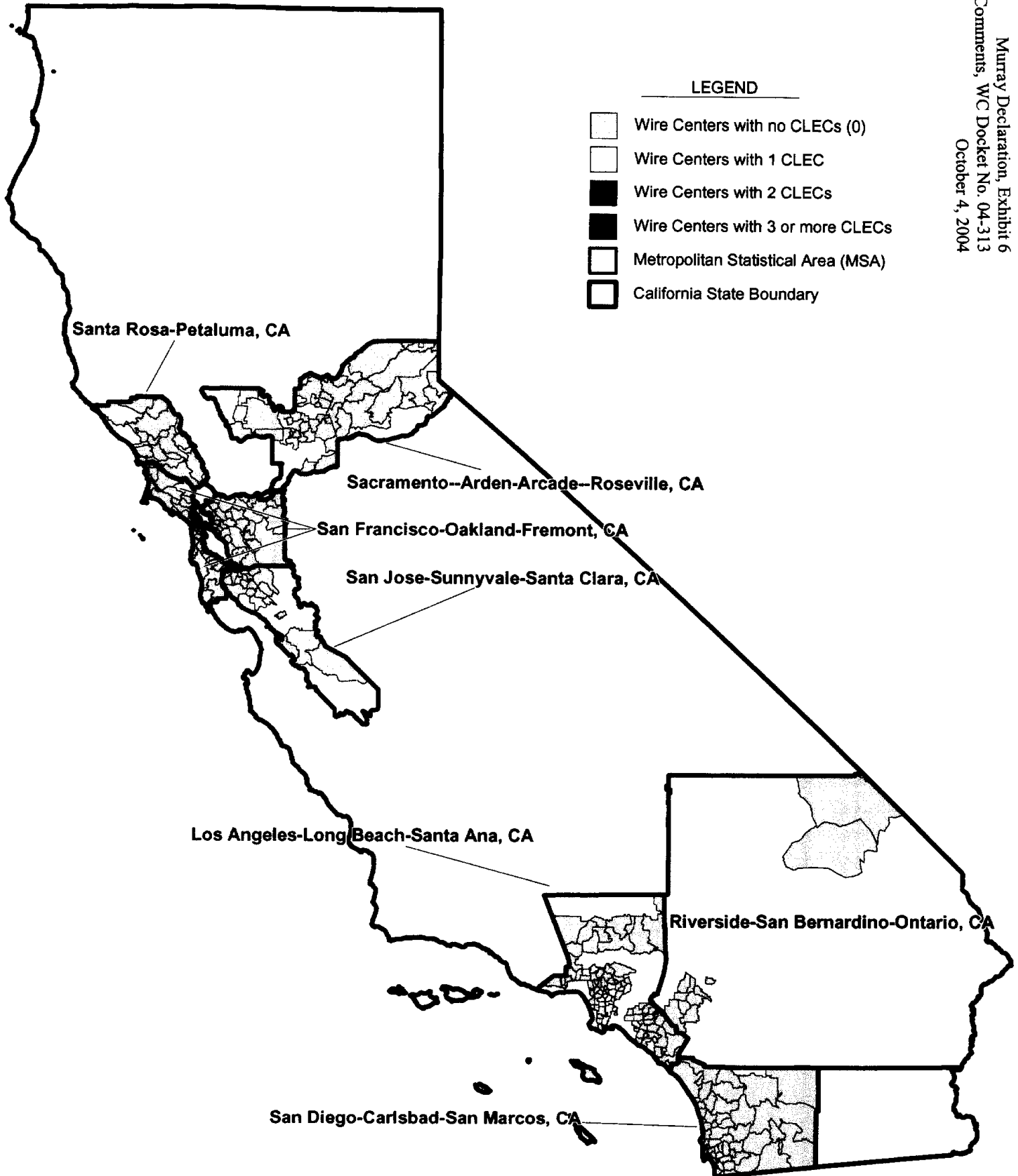
Murray Declaration, Exhibit 6  
MCI Comments, WC Docket No. 04-313  
October 4, 2004



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**CLECS THAT PASS ALL SCREENS  
(SBC California Service Territory)**

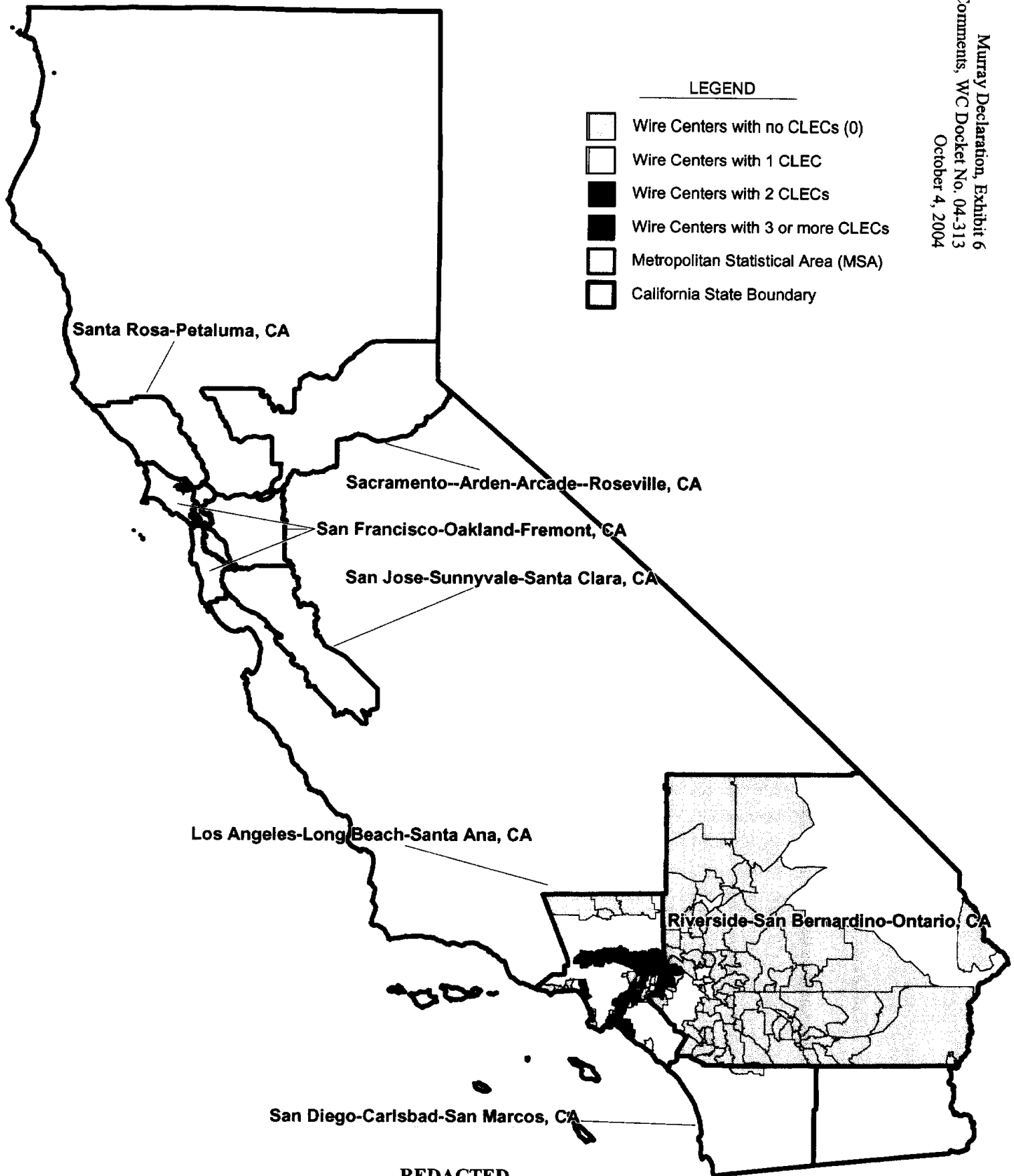
Murray Declaration, Exhibit 6  
MCI Comments, WC Docket No. 04-313  
October 4, 2004



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**MASS-MARKET TRIGGER BASE CASE**  
**Replication Of CLEC Counts Underlying Verizon Trigger Claim**  
**(Verizon California Service Territory)**

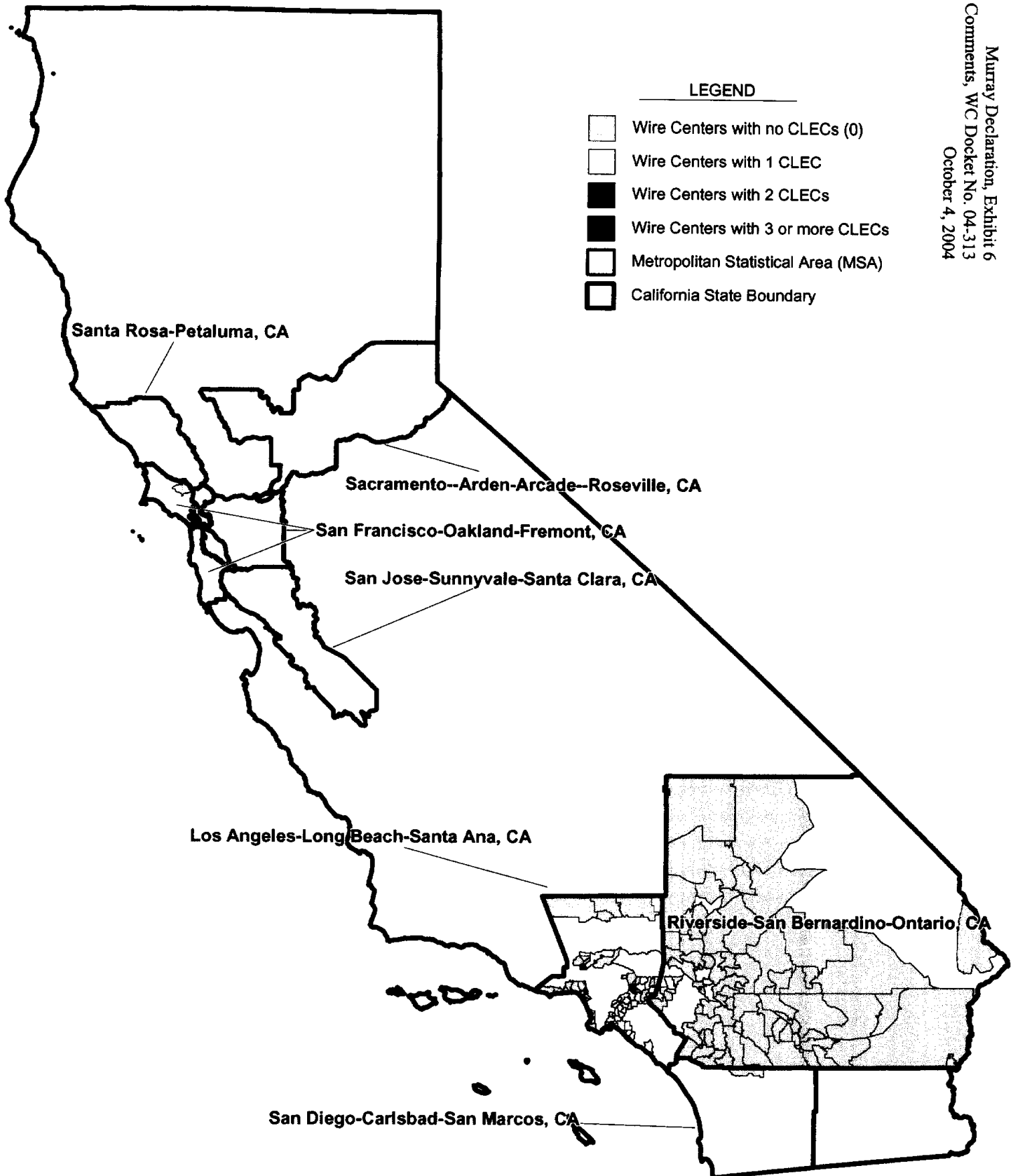
Murray Declaration, Exhibit 6  
MCI Comments, WC Docket No. 04-313  
October 4, 2004



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**ACTIVE UNAFFILIATED CLECS  
THAT SERVE RESIDENTIAL CUSTOMERS  
(Verizon California Service Territory)**

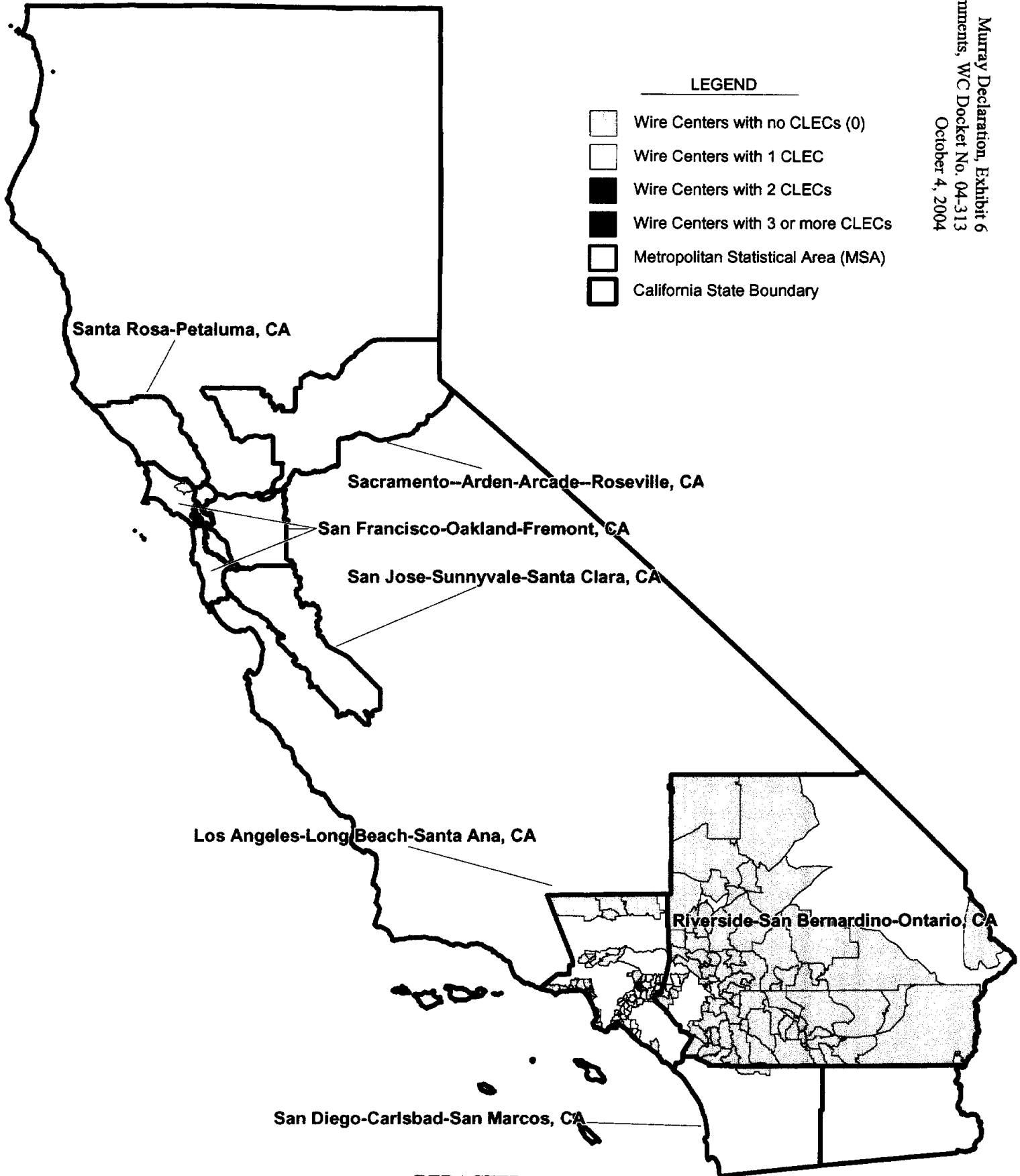
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MCI Comments, WC Docket No. 04-313  
October 4, 2004



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**CLECS THAT PASS ALL SCREENS  
(Verizon California Service Territory)**

Murray Declaration, Exhibit 6  
MCI Comments, WC Docket No. 04-313  
October 4, 2004



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